

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A method of identifying at least one epitope binding domain capable of binding to a predetermined epitope comprising:
 - (a) displaying on the surface of a biological display system a panel of ~~bivalent or multivalent~~ recombinant polypeptides comprised of (1) an N-terminal blocking domain at the N-terminus of said recombinant polypeptide, (2) a C-terminal anchoring domain at the C-terminus of said recombinant polypeptide, said C-terminal anchoring domain—~~that~~ mediates anchoring of said recombinant polypeptide to the surface of said display system, and (3) at least one epitope binding domain positioned between said N-terminal blocking domain and said C-terminal anchoring domain; and
 - (b) identifying a subset of said recombinant polypeptides that bind to said predetermined epitope.

2. **(Currently Amended)** The method of claim 1, wherein said N-terminal blocking domain and said epitope binding domain are linked by a polypeptide linker, ~~wherein said polypeptide linker comprises a plurality of hydrophilic amino acids and connects the C-terminal end of said blocking domain and the N-terminal end of said epitope binding domain.~~

3. **(Previously Presented)** The method of claim 1 or 2, wherein said epitope binding domain is a pair of V_H - V_L , V_H - V_H or V_L - V_L domains.

4. **(Currently Amended)** The method of claim 1 wherein said display system is a filamentous phage system ~~produced by bacteria transfected therewith~~, a baculovirus expression system, a ribosome based expression system, a bacteriophage lambda display system or a bacterial surface expression system.

5. **(Currently Amended)** The method of claim 4, further comprising, prior to step (a),

the further step of:

(a") transfecting bacteria with recombinant vectors encoding said recombinant polypeptides.

6. **(Currently Amended)** The method of claim 1-~~5~~, further comprising, prior to step (a"), the further step of:

(a') cloning a panel of nucleic acid molecules encoding said epitope binding domain into a vector.

7. **(Original)** The method of claim 6, wherein said panel of nucleic acid molecules is derived from immune competent cells of a mammal, fish or bird.

8. **(Currently Amended)** The method of claim 1, wherein said N-terminal ~~binding-blocking~~ domain comprises at least 9 amino acids.

9. **(Currently Amended)** The method of claim 8, wherein said ~~C-terminal-anchoring~~N-terminal blocking domain is or is derived from the N2-domain of the gene III product of filamentous phage.

10. **(Previously Presented)** The method of claim 1, wherein said C-terminal anchoring domain is or is derived from the C-terminal CT-domain of the gene III product of filamentous phage.

11. **(Currently Amended)** The method of claim 1, wherein said ~~bi- or multivalent recombinant~~ polypeptide is a bi- or multifunctional polypeptide.

12. **(Currently Amended)** The method of claim 1, wherein said N-terminal blocking domain comprises an amino acid sequences that forms an effector protein-domain having a conformation-suitable for a biological activity, capable of sequestering an ion, or capable of selective binding to a solid support.

13. **(Currently Amended)** The method of claim 12 wherein said effector ~~protein-domain~~ is an enzyme, toxin, receptor, binding site, biosynthetic antibody binding site, growth factor, cell-differentiation factor, lymphokine, cytokine or hormone.
14. **(Currently Amended)** The method of claim ~~12-38~~ wherein said sequence capable of sequestering an ion is calmodulin, methallothionein, a fragment thereof, or an amino acid sequence rich in at least one of glutamic acid, aspartic acid, lysine, and arginine.
15. **(Currently Amended)** The method of claim ~~1238~~ wherein said polypeptide sequence capable of selective binding to a solid support is a positively or negatively charged amino acid sequence, a cysteine-containing amino acid sequence, streptavidin, or a fragment of Staphylococcus protein A.
16. **(Currently Amended)** The method of claim 13, wherein said receptor ~~iscomprises~~ a co-stimulatory surface molecule important for T-cell activation, ~~or comprises~~ an epitope binding ~~domainsite~~ or a hormone binding site.
17. **(Original)** The method of claim 16, wherein said co-stimulatory surface molecule is CD80 (B7-1), CD86 (B7-2), CD58 (LFA-3) or CD54 (ICAM-1).
18. **(Cancelled)**
19. **(Currently Amended)** The method of claim 3, wherein said pair of epitope binding domains are connected by a flexible linker, ~~preferably by a polypeptide linker disposed between said domains, wherein said polypeptide linker comprises a plurality of hydrophilic amino acids of a length sufficient to span the distance between the C-terminal end of one of said domains and the N-terminal end of the other of said domains when said fusion protein assumes a conformation suitable for binding when disposed in aqueous solution.~~

20. **(Currently Amended)** The method of claim 1, wherein the identification of said further comprising the binding site domain comprises the steps of:
 - (b') ~~removing said anchoring domain from said recombinant polypeptide;~~
 - (b'') ~~periplasmatically expressing the nucleic acid molecules encoding the remainder of said recombinant polypeptide in bacteria; and~~
 - (b''') verifying whether said epitope binding site domain binds to said predetermined epitope.
21. **(Currently Amended)** KA kit comprising:
 - (a) a panel of recombinant vectors encoding a panel of recombinant polypeptides comprised of: as defined in any one of claims 1 to 20; and/or
 - i. an N-terminal blocking domain at the N-terminus of said recombinant polypeptides;
 - ii. a C-terminal anchoring domain at the C-terminus of said recombinant polypeptides;
 - iii. at least one epitope binding domain positioned between said N-terminal blocking domain and said C-terminal anchoring domain; and
 - (b) a bacterial library transfected with a panel of vectors as defined in (a).
22. **(Currently Amended)** An isolated epitope binding site domain or recombinant polypeptide obtainable by the method of claim 1, wherein said epitope binding site domain or recombinant polypeptide comprises at least one three of the complementarity determining regions (CDR) of the scFv fragment according to any one of from SEQ ID Nos. 61, 63, 65, 67, 69, 71, 73, 75 and 77.
23. **(Currently Amended)** An isolated polypeptide or an antibody comprising at least one epitope binding site domain or fusion protein of according to claim 22.
24. **(Currently Amended)** The An isolated polypeptide or antibody of ~~claim 23~~ having comprising at least one epitope binding domain selected from the group consisting

~~of the amino acid sequence according to any one of SEQ ID Nos.: 61, 63, 65, 67, 69, 71, 73, 75 and 77.~~

25. **(Currently Amended)** ~~An isolated P~~polynucleotides ~~which upon expression that encodes the a~~ polypeptide or antibody ~~of~~according to claim 23 or 24.
26. **(Currently Amended)** A cell transfected with a polynucleotide ~~of~~according to claim 25.
27. **(Original)** A process for the preparation of a polypeptide or antibody of claim 23 or 24 comprising cultivating a cell of claim 26 under conditions suitable for the expression of the polypeptide and isolating the polypeptide from the cell culture medium.
28. **(Currently Amended)** A pharmaceutical composition ~~containing~~comprising a polypeptide or antibody ~~of~~according to claim 23 or 24 ~~and optionally a pharmaceutically acceptable carrier.~~
29. **(Currently Amended)** A diagnostic composition comprising the polypeptide or antibody of claim 23 or 24 ~~and optionally suitable means for detection.~~
30. **(Currently Amended)** ~~An isolated epitope binding site-domain or recombinant polypeptide obtainable by the method of claim 1, wherein said epitope binding site-domain or recombinant polypeptide comprises at least one— the three complementarity determining regions (CDR) of the scFv fragment according to from~~ SEQ ID No. 75.
31. **(Currently Amended)** ~~An isolated~~ polypeptide or ~~an~~ antibody comprising at least one epitope binding site-domain or recombinant polypeptide of according to claim 30.
32. **(Currently Amended)** ~~The~~An isolated polypeptide or antibody ~~of claim 23, having comprising the amino acid sequence according to~~ set forth in SEQ ID No. 75.

33. **(Currently Amended)** The polypeptide of claim 32 having comprising the amino acid sequence ~~according to~~set forth in SEQ ID No. 75.
34. **(Currently Amended)** ~~An isolated polypeptide or an antibody comprising at least one~~three of the complementarity binding regions (CDR)~~binding site domain or recombinant polypeptide that comprises any one of~~from SEQ ID Nos. 61, 63, 65, 67, 69, 71, 73, 75 and 77.
35. **(Currently Amended)** ~~An isolated polypeptide or an antibody comprising at least one~~the epitope~~binding site domain or fusion protein that comprises~~set forth in SEQ ID No. 75.
36. **(Previously Presented)** The method of claim 1, wherein said epitope binding domain is comprised of at least two domains selected from the group consisting of V_H and V_L.
37. **(Previously Presented)** The method of claim 19, wherein said polypeptide linker comprises a plurality of hydrophilic amino acids and allows for said epitope binding domains to assume a conformation suitable for binding epitope when disposed in aqueous solution.
38. **(New)** The method of claim 12, wherein said effector protein domain is capable of sequestering an ion or selective binding to a solid support.
39. **(New)** The pharmaceutical composition according to claim 28, further comprising a pharmaceutically acceptable carrier.
40. **(New)** The diagnostic composition according to claim 29, further comprising means for detection.
41. **(New)** The method of claim 1, wherein said recombinant polypeptides are bivalent or multivalent.

42. **(New)** The method of claim 2, wherein said polypeptide linker comprises a plurality of hydrophilic amino acids and connects the C-terminal end of said blocking domain and the N-terminal end of said epitope binding domain